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10/725,332

12/02/2003

Toyohiko Mitsuzawa

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

RILEY, MARCUS T

ART UNIT

PAPER NUMBER

2625

MAIL DATE

DELIVERY MODE

08/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/725,332	Applicant(s) MITSUZAWA, TOYOHICO	
	Examiner MARCUS T. RILEY	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-13 is/are pending in the application.
4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/02/2003; 09/14/2007; 11/05/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

1. This office action is responsive to applicant's remarks received on May 08, 2009. **Claims 1-9 & 11-13** remain pending. **Claim 10** has been cancelled.

Response to Arguments

2. Applicant's arguments with respect to **claims 1-5, 9 & 11-13** have been considered but are moot in view of the new ground(s) of rejection. Furthermore, newly acquired reference Vives (US 6,663,304 B2, hereinafter Vives '304) discloses the new limitation wherein a first supply direction along which the first medium supply section supplies the recording medium with respect to the first print head is the same as a second supply direction along which the second medium supply section supplies the recording medium with respect to the second print head, wherein the recording apparatus further comprises a carriage that moves in a moving direction intersecting the first supply direction and the second supply direction, and wherein both the first print head and the second print head are equipped on the carriage. (See 35 USC § 103 rejection below).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-7, 9-11 & 13** rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriyama et al. (US 5,710,634 hereinafter, Kuriyama '634) in combination with Barry et al. (US 5,859,711 hereinafter, Barry '711) and further in view of Vives (US 6,663,304 B2, hereinafter Vives '304).

Regarding claim 1; Kuriyama '634 discloses a recording apparatus comprising:

a first medium supply section that supplies a recording medium to be recorded (See Fig. 2, #9 *"A sheet of paper fed from a paper feed tray 9 is moved along a path which is defined beneath the display unit 3..."* column 7, lines 66-67);

a second medium supply section that supplies a recording medium to be recorded (See Fig. 2, #15 *"A print paper feed tray 15 holds a stack of paper sheets for printing..."* column 7, lines 66-67);

Kuriyama '634 does not expressly disclose a first print head that is provided in correspondence with the first medium supply section and that performs recording on the recording medium supplied by the first medium supply section; a second print head that is provided in correspondence with the second medium supply section and that performs recording on the recording medium supplied by the second medium supply section, the second print head being different from the first printhead.

Barry '711 discloses a first print head that is provided in correspondence with the first medium supply section and that performs recording on the recording medium supplied by the first medium supply section (See Figure 2, where Fig. 2 is a block diagram showing a medium supply section were pages are distributed to the various print engines 16. See Figure 4 where there is illustrated a side view of a three print engine module parallel printer which includes three print engines 136, 138 and 40, all stacked one on top of the other wherein #150 is

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representative of the imaging device. Images are formed on a medium and outputted to an output bin 40 in Figure 2. See column 6, lines 7-47);

a second print head that is provided in correspondence with the second medium supply section and that performs recording on the recording medium supplied by the second medium supply section, the second print head being different from the first printhead (See Rejection above for the first printhead. Moreover, each print engine has its own imaging device #150 where images are recorded on a medium. Barry also discloses a plurality of print engines each having a rasterized input and an output bin).

Kuriyama '634 and Barry '711 are combinable because they are from same field of endeavor of printer systems (*"The present invention pertains in general to electrophotographic printers and, more particularly, to a plurality of print engines arranged in parallel to process print jobs in a parallel manner."* Barry '711 at column 1, lines 15-18).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Kuriyama '634 by adding a first and second print head as taught by Barry '711. The motivation for doing so would have been because it advantageous to save time and space by eliminating the need for multiple printers. Therefore, it would have been obvious to combine Kuriyama '634 with Barry '711 to obtain the invention as specified in claim 1.

Kuriyama '634 as modified does not expressly disclose wherein a first supply direction along which the first medium supply section supplies the recording medium with respect to the first print head is the same as a second supply direction along which the second medium supply section supplies the recording medium with respect to the second print head, wherein the recording apparatus further comprises a carriage that moves in a moving direction intersecting the first supply direction and the second supply direction, and wherein both the first print head and the second print head are equipped on the carriage.

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Vives '304 discloses wherein a first supply direction along which the first medium supply section supplies the recording medium with respect to the first print head is the same as a second supply direction along which the second medium supply section supplies the recording medium with respect to the second print head (See Fig. 2 wherein #'s 250 and 252 are the media feed supply zones. #'s 206 - 212 show the printheads that travel in the direction of #248 and # 246. See also column 3, lines 15-33).

wherein the recording apparatus further comprises a carriage that moves in a moving direction intersecting the first supply direction and the second supply direction and wherein both the first print head and the second print head are equipped on the carriage (See Figure 2 wherein #'s 246 and 248 represent the direction of the carriage movement; Fig. 5 shows the carriage; Fig. 4 shows an alternate embodiment of a printer apparatus 400 which may use a carriage support or track 402 to carry printing units 404 or cartridges and Fig. 2 shows wherein print head units 206-212 travel on a track 218A & 218B. See also column 3, lines 15-33 and column 6, lines 15-24)

Kuriyama '634 and Vives '304 are combinable because they are from same field of endeavor of printer systems (*"The present invention relates to printers..."* Vives '304 at column 1, line 7).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Kuriyama '634 by adding a first and second medium supply section and a carriage as taught by Barry '711. The motivation for doing so would have been because it advantageous to have a faster and efficient printer. Therefore, it would have been obvious to combine Kuriyama '634 with Vives '304 to obtain the invention as specified in claim 1.

Regarding claim 2; Kuriyama '634 discloses a recording apparatus further comprising: at least two controllers, each of said controllers being provide in one-to-one correspondence with

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one of said recording heads and for controlling the corresponding recording head (“See FIG. 62 where Fig. 62 is a schematic block diagram of the control system of the image forming apparatus. #2022 is the printer controller for controlling the ink jet printer section 2001 and #2023 denotes a scanner controller for controlling the reading sensor R. See also column 27, lines 41-67 thru column 28, lines 1-9).

Regarding claim 3; Kuriyama ‘634 discloses a recording apparatus further comprising: at least two information generators, each of said information generators being provide in one-to-one correspondence with one of said recording heads and for generating recording information for the corresponding recording heads, wherein each said recording head performs recording based on the recording information (“See FIG. 62 where “IJRA” and “R” are the information generators. IJRA is the ink jet printer in correspondence with its recording head and generates a printout and “R” is the scanner in correspondence with its recording head and generates a output based on the recorded information. See also column 3, lines 59-67 thru column 4, lines 1-9).

Regarding claim 4; Kuriyama ‘634 discloses a recording apparatus wherein said recording heads perform recording on said recording medium supplied from the corresponding medium supply sections in the order in which said recording information is generated by said information generators corresponding to each of said recording heads (“...another aspect of the present invention provides an output apparatus comprising... *executing means for executing an application program including a program for recording or outputting information onto an output medium and/or a program for reading recorded information which has been outputted onto an output medium...*” column 4, lines 18-28). See also (“...an aspect of the present invention provides an output apparatus comprising: conveyer means for conveying an output medium, the *conveyer means having two output medium feed portions including respective feeding convey paths and one output medium ejection portion, wherein the feeding convey paths of the two output medium feed portions join into one ejection convey path reaching the output medium ejection portion; output means for recording or outputting information onto an output medium in accordance with*

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output signals... reader means for reading recorded information which has been outputted onto an output medium..." column 4, lines 59-67 thru column 4, lines 1-9).

Regarding claim 5; Kuriyama '634 discloses a recording apparatus wherein each of said recording heads is capable of performing recording in different recording modes (See Figures 16 and 17 where printing on recording paper is fed from ADF "*FIGS. 16 and 17 are flow charts illustrative of the operation for **printing data on a paper sheet fed from the ADF**. Referring to FIG. 16, the "**ADF printing mode**" is started in response to "start" instruction given by the main control section 201... FIG. 17 shows the printing routine conducted in Step S32 of the flow shown in FIG. 16. **Printing modes** such as the size of the printing width, e.g., A 4 size or B 4 size, is conducted in Step S37.*" column 16, lines 11-44). See also (See Figures 18 and 19 where printing on recording paper is fed from ASF "*FIGS. 18 and 19 are flow charts illustrative of the operation for **printing data on a recording paper fed from the ASF**. Referring first to FIG. 18, the **ASF printing mode** is started in response to "start" instruction given by the main control section 201 in Step S22... FIG. 19 shows the printing routine performed in the Step S57 of the flow shown in FIG. 18. **In Step S62, printing mode is set in accordance with printing mode instruction** given by the main control section 201. Then, the printing offset is set in Step S63. In the **ASF printing mode**, the amount of offset is fixed to L1, unlike the operation in the **ADF printing mode**.*" column 17, lines 24-46).

Regarding claim 6; Kuriyama '634 discloses a recording apparatus wherein each of said medium supply sections comprises a driving section for driving the corresponding medium supply section and when supplying a recording medium that is arranged across at least two of said medium supply sections, the driving sections of those medium supply sections across which the recording medium is arranged operate together to supply the recording medium ("*The scanner section 20 and the printer section 30 respectively incorporate an original reading section 205 and a printing section 209, and further contain a sensor section 206 and a motor and driving section 207 which are used commonly by the scanner section 20 and the printer section 30. In the illustrated embodiment, the scanner section 20 and the printer section 30 have paper conveyor systems which are partly common to each other. These sections 20 and 30, including the commonly used sensor section 206*

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and the motor and driving section 207, are under control of the scanner /printer control section 202.” column 8, lines 62-67 thru column 9, lines 1-7).

Regarding claim 7; Kuriyama ‘634 discloses a recording apparatus wherein each of said medium supply sections comprises a supply section for supplying the recording medium, and a driving section for driving that supply section and when supplying a recording medium that is arranged across the supply sections of at least two of said medium supply sections, the supply sections across which the recording medium is arranged are driven by the driving section for driving one of those supply sections (*“The scanner section 20 and the printer section 30 respectively incorporate an original reading section 205 and a printing section 209, and further contain a sensor section 206 and a motor and driving section 207 which are used commonly by the scanner section 20 and the printer section 30. In the illustrated embodiment, the scanner section 20 and the printer section 30 have paper conveyor systems which are partly common to each other. These sections 20 and 30, including the commonly used sensor section 206 and the motor and driving section 207, are under control of the scanner /printer control section 202.” column 8, lines 62-67 thru column 9, lines 1-7).*

Regarding claim 9; Kuriyama ‘634 discloses wherein each of said recording heads has a recording portion row in which a plurality of recording portions are arranged in a row with equal pitch in a supply direction in which the recording medium is supplied and as for two said recording heads that are arranged next to each other in a direction orthogonal to said supply direction, a distance between the rearmost recording portion, in said supply direction, of the recording portion row of one of the two recording heads and the foremost recording portion, in said supply direction, of the recording portion row of the other of the two recording heads is equal to said pitch (*“Referring to FIG. 8, the recording head 40 has 64 nozzles Nos. 1 to 64 arranged in a single row which extends in the main-scan direction indicated by an arrow N. The pitch at which these nozzles are arranged is 1/360 inch. Thus, the nozzles provide a recording density of 360 dpi. The head 40 moves in the sub-scan directions indicated by an*

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arrow S, together with the carriage 31 which is driven by the carriage motor 221, this enabling formation of two-dimensional images. The amount of conveyance of the paper performed by the conveyor motor 217 corresponds to the length of the nozzle row. Namely, after forming one-line image by selectively activating 64 nozzles, the paper is fed by an amount corresponding to 64 dot pitches, i.e., 64/360 inch, thus preparing for the printing of the next line.” column 8, lines 24-37);

Regarding claim 11; Claim 11 contains substantially the same subject matter as claim 1. Therefore, claim 11 is rejected on the same grounds as claim 1. However, the only difference is that claim 11 incorporates computer-readable storage medium having recorded thereon a computer program for a recording apparatus. Kuriyama ‘634 discloses this limitation at column 4, lines 50-52 (“...a further aspect of the present invention provides an output method comprising the steps of: **storing first information which is to be recorded or outputted onto an output medium; reading from an output medium second information which has been outputted onto the output medium;**”).

Regarding claim 12; Claim 12 contains substantially the same subject matter as claim 1. Therefore, claim 12 is rejected on the same grounds as claim 1. However, the only difference is that claim 12 incorporates a computer system comprising: a computer, and a recording apparatus connected to said computer. Kuriyama ‘634 discloses discloses this limitation at column 25, lines 11-19. “More specifically, FIG. 58 is a sectional view of a printer, e.g., a laser beam printer, which can be used as the printer section 30 shown in FIG. 4. Referring to this Figure, a laser beam printer main part 1500 stores printing information and other information supplied from an external host computer, and forms a bit map image in accordance with such information so as to print an image on a recording paper which is used as the recording medium.” column 25, lines 11-19).

Regarding claim 13; Claim 13 contains substantially the same subject matter as claim 1. Therefore, claim 13 is rejected on the same grounds as claim 1.

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5. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kuriyama '634, Barry '711 and Vives '304 as applied to claim 1, and further in view of Botten et al. (US 2003/0098984 A1, hereinafter Botten '984).

Regarding claim 8; Kuriyama '634 as modified does not expressly disclose a recording apparatus wherein each of said medium supply sections comprises a driving force blocking section that blocks a transmission path for transmitting driving force caused by said driving sections; and when supplying a recording medium with one of the supply sections across which the recording medium is arranged, the driving force blocking section of the medium supply section including the other supply section blocks the transmission path for transmitting the driving force caused by the driving section of that medium supply section.

Botten '984 discloses a recording apparatus wherein each of said medium supply sections comprises a driving force blocking section that blocks a transmission path for transmitting driving force caused by said driving sections (*"A platen gear 82 may be moved inward or outward by an arm 84 to form a clutch mechanism for applying and removing torque to the platen shaft 54 (FIG. 6). This clutch mechanism receives torque from the capstan gear 86 to rotate the platen roller 76. The capstan drive 80 also engages a compliant belt drive 90 for transferring torque to output kickers after the media passes the print station to be dispense into an output tray 113 (FIG. 22)."* page 4, paragraph 0065);

and when supplying a recording medium with one of the supply sections across which the recording medium is arranged, the driving force blocking section of the medium supply section including the other supply section blocks the transmission path for transmitting the driving force caused by the driving section of that medium supply section (*"This may be accomplished by engaging the platen roller 76 with the clutch members 82 and 84 to pull the leading edge past the printhead 151 until the pinch and capstan rollers can grab the leading edge to commence translating the media sheet. After the border of the leading edge is blackened by the printhead 151, the clutch members 82 and 84 disengage the platen roller 76 from the capstan drive 80 to allow the capstan*

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and pinch rollers 79 and 77 to pull the media sheet through the print station for transferring the desired image portion to the sheet. While transferring the desired image portion between the borders at the leading and trailing edges, the printhead 151 may also blacken the borders at the side edges. After the desired image portion is transferred to the media sheet, the platen roller 76 capstan and pinch roller may pull the trailing edge of the media sheet past the printhead 151 to be blackened.” page 8, paragraph 0106).

Kuriyama ‘634 and Botten ‘984 are combinable because they are from same field of endeavor of printer systems (*“Embodiments of the present invention are directed to printing systems.”* Botten ‘984 page 1, paragraph 0002).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Kuriyama ‘634 by adding a recording apparatus with a driving force blocking section as taught by Botten ‘984. The motivation for doing so would have been because it advantageous to eliminate the need for multiple printers for performing different types of image transfer processes. Therefore, it would have been obvious to combine Kuriyama ‘634 with Botten ‘984 to obtain the invention as specified in claim 1.

Examiner Notes

6. The Examiner cites particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARCUS T. RILEY whose telephone number is (571)270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marcus T. Riley
Assistant Examiner
Art Unit 2625

/MARCUS T. RILEY/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625